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10/518,409	12/17/2004	Makoto Makayama	263485US90PCT	7946

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EXAMINER
MATTIS, JASON E

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
08/28/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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	Application No.	Applicant(s)
Office Action Summary	10/518,409	MAKAYAMA ET AL.
	Examiner	Art Unit	
	JASON E. MATTIS	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>09 June 2008</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-13</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-13</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All b) ☐ Some * c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the Amendment filed 6/9/08. Claims 1-13 are

currently pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1-5, 8, 9, 12, and 13 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Kurita et al. (WO00/41364 as cited by the Applicant's IDS filed

1/25/05 *note column and line numbers referenced below correspond to U.S. Pat.

6898640 B1, which is an English translation of WO00/41364) in view of Ala-Luukko et

al. (U.S. Pat. 6934285 B1).

    With respect to claim 1, Kurita et al. discloses a gateway device connected to a

mobile communication network, an external network, and a service control device

executing service control based on signals received from a communication terminal or a

predetermined communication device so as to transmit and receive signals to and from

the service control device **(See column 5 lines 48-58, column 10 lines 4-48, and**

Figures 1 and 4 of Kurita et al. for reference to gateway 5 connected to a mobile communication network 10, internet 6, which is an external communication network, and service control point 9 executing service control based on packets received from mobile station 1, which is a communication terminal to transmit and receive signals from the service control point 9). Kurita et al. also disclose a receiver receiving control information required for providing service from the service control device **(See column 10 lines 4-48 and Figure 4 of Kurita et al. for reference to the gateway 5 receiving control information from the service control point 9).** Kurita et al. further discloses an information processor performing a predetermined information process on the control information for received signals **(See column 10 lines 4-48 and Figures 4 and 5 of Kurita et al. for reference to the gateway 9 processing and transferring data received from the mobile station 1 and the internet 6 based on the received control information).** Kurita et al. does not specifically disclose control information including rules or policies defined for each of a plurality of services with each rule or policy specifying processing for a signal.

With respect to claim 12, Kurita et al. discloses a gateway device connected to a mobile communication network, an external network, and a service control device executing service control based on signals received from a communication terminal or a predetermined communication device so as to transmit and receive signals to and from the service control device **(See column 5 lines 48-58, column 10 lines 4-48, and Figures 1 and 4 of Kurita et al. for reference to gateway 5 connected to a mobile communication network 10, internet 6, which is an external communication**

network, and service control point 9 executing service control based on packets received from mobile station 1, which is a communication terminal to transmit and receive signals from the service control point 9). Kurita et al. also discloses receiving and retaining rules from the service control device and judging a service type and destination request signal by rules for service request signals received from the networks **(See column 10 lines 4-48 and Figures 4 and 5 of Kurita et al. for reference to gateway 5 receiving rules and controlling communications to route packets to destinations in both the mobile network 10 and external networks based on the rules)**. Kurita et al. further discloses performing protocol conversion in accordance with a service type **(See column 6 line 66 to column 7 line 25 of Kurita et al. for reference to performing protocol translation based on a simplified protocol TL service type between packets received from and sent to devices of the wireless network and packet received from and sent to external devices on external networks)**. Kurita et al. does not specifically disclose a plurality of service types with rules or policies relating to the service types and specifying processing of a service request signal.

  With respect to claims 1 and 12, Ala-Luukko et al., in the field of communications, discloses a gateway receiving control information including rules or policies defined for each of a plurality of services with each rule or policy specifying processing for a signal **(See column 1 lines 19-32, column 4 line 55 to column 5 line 25, and Figure 1 of Ala-Luukko et al. for reference to a gateway receiving a list from a service control point indicating a type of service, of a plurality of possible**

services, and specifying how messages corresponding to each type of service are to be processed and converted when being sent by the gateway to an external network). A gateway receiving control information including rules or policies defined for each of a plurality of services with each rule or policy specifying processing for a signal has the advantage of allowing a gateway to translate messages of multiple different service types from a format compatible with a service control device to a format compatible with an external network **(See the abstract of Ala-Luukko et al. for reference to this advantage)**.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ala-Luukko et al., to combine a gateway receiving control information including rules or policies defined for each of a plurality of services with each rule or policy specifying processing for a signal, as suggested by Ala-Luukko et al., with the system and method of Kurita et al., with the motivation being to allow a gateway to translate messages of multiple different service types from a format compatible with a service control device to a format compatible with an external network.

With respect to claim 2, Kurita et al. discloses a gateway rule retainer retaining a gateway rule given through the service control device and a gateway rule executer executing a process by applying the rule **(See column 10 lines 4-48 and Figures 4 and 5 of Kurita for reference to receiving rules form the service control point 9 and executing the rules to control further communications between the mobile station 1 and the internet 6)**.

With respect to claim 4, Kurita et al. discloses retaining connection path selection rules and applying the connection path selection rules to determine a destination of a received signal **(See column 10 lines 4-48 and Figures 4 and 5 of Kurita for reference to retaining and applying connection path selection rules such that packets are routed by the gateway 5 to and from determined destinations including the mobile station 1 and devices of the internet 6)**.

With respect to claim 8, Kurita et al. discloses performing protocol conversion on packets received from the communication terminal into signals usable by devices on the external network and vice versa **(See column 6 line 66 to column 7 line 25 of Kurita et al. for reference to performing protocol translation between packets received from and sent to devices of the wireless network and packet received from and sent to external devices on external networks)**.

With respect to claims 3 and 13, Kurita et al. discloses gateway rules comprising packet allocation information and information allocation information as well as executing the rules for packet allocation and information allocation **(See column 10 lines 4-48 and Figures 4 and 5 of Kurita for reference to retaining and applying connection path selection rules, which are packet allocation and information allocation rules, such that packets are routed by the gateway 5 to and from determined destinations including the mobile station 1 and devices of the internet 6)**. Although Kurita et al. does disclose storing and executing protocol conversion rules **(See column 6 line 66 to column 7 line 25 of Kurita et al. for reference to performing protocol translation based on a simplified protocol TL service type**

between packets received from and sent to devices of the wireless network and

packet received from and sent to external devices on external networks), Kurita et

al. does not specifically disclose executing received protocol conversion and information

service type extraction rules for packets transferred among the service control device.

　　　With respect to claims 3 and 13, Ala-Luukko et al., in the field of

communications, discloses a gateway executing received protocol conversion and

information service type extraction rules for packets transferred among a service control

device **(See column 4 line 55 to column 5 line 13 and Figure 1 of Ala-Luukko et al.**

for reference to a gateway performing protocol conversion on signals to and from

a service control point based on a message type indicator extracted from a

received signal). Executing received protocol conversion and information extraction

rules for packets transferred among a service control device has the advantage of

allowing devices to transmit and receive data to and from the service control device

transparently using their native protocol such that processing is reduced in both the

devices and the service control device.

　　　It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Ala-Luukko et al., to combine executing

received protocol conversion and information extraction rules for packets transferred

among a service control device, as suggested by Ala-Luukko et al., with the system and

method of Kurita et al., with the motivation being to allow devices to transmit and

receive data to and from the service control device transparently using their native

protocol such that processing is reduced in both the devices and the service control device.

With respect to claim 5, Kurita et al. does not specifically disclose rules comprising service type information, source information, and destination information with connection path selection execution judging the destination of packets based on these rules.

With respect to claim 5, Ala-Luukko et al. discloses rules comprising service type information, source information, and destination information with connection path selection execution judging the destination of packets based on these rules (**See column 4 line 55 to column 5 line 13, column 5 line 48 to column 6 line 8, and Figure 1 and 2 of Ala-Luukko et al. for reference to rules comprising type of message, source, and destination identifiers and for reference to selecting a destination for messages based on these rules)**. Using comprising service type information, source information, and destination information with connection path selection execution judging the destination of packets based on these rules has the advantage of allowing routing to be done efficiently based on packet type and communication endpoints.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Ala-Luukko et al., to combine using comprising service type information, source information, and destination information with connection path selection execution judging the destination of packets based on these rules, as suggested by Ala-Luukko et al., with the system and method of Kurita et

al., with the motivation being to allow routing to be done efficiently based on packet type and communication endpoints.

With respect to claim 9, Although Kurita et al. does disclose storing and executing protocol conversion rules **(See column 6 line 66 to column 7 line 25 of Kurita et al. for reference to performing protocol translation based on a simplified protocol TL service type between packets received from and sent to devices of the wireless network and packet received from and sent to external devices on external networks)**, Kurita et al. does not specifically disclose a gateway converting a signal into a signal corresponding to a service type executed in the service control device before being exchanged between networks.

With respect to claim 9, Ala-Luukko et al., in the field of communications, discloses a gateway converting a signal into a signal corresponding to a service type executed in the service control device before being exchanged between networks **(See column 4 line 55 to column 5 line 13 and Figure 1 of Ala-Luukko et al. for reference to a gateway performing protocol conversion on signals to and from a service control point based on a message type indicator extracted from a received signal)**. A gateway converting a signal into a signal corresponding to a service type executed in the service control device before being exchanged between networks has the advantage of allowing devices to transmit and receive data to and from the service control device transparently using their native protocol such that processing is reduced in both the devices and the service control device.

It would have been obvious for one of ordinary skill in the art at the time of the
invention, when presented with the work of Ala-Luukko et al., to combine a gateway
converting a signal into a signal corresponding to a service type executed in the service
control device before being exchanged between networks, as suggested by Ala-Luukko
et al., with the system and method of Kurita et al., with the motivation being to allow
devices to transmit and receive data to and from the service control device transparently
using their native protocol such that processing is reduced in both the devices and the
service control device.

4.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurita in
view of Ala-Luukko et al. and in further view of Maufer et al. (U.S. Pat. 7120930 B2).

        With respect to claim 6, the combination of Kurita et al. and Ala-Luukko et al.
does not disclose retaining and applying a screening policy to packets to judge the
correctness of the signals and to discard an inappropriate packet signal.

        With respect to claim 6, Maufer et al., in the field of communications, discloses
retaining and applying a screening policy to packets to judge the correctness of the
signals and to discard an inappropriate packet signal **(See column 18 line 58 to
column 19 line 9 and column 20 lines 14-40 of Maufer et al. for reference to
screening packets for correctness and discarding invalid packets)**. Retaining and
applying a screening policy to packets to judge the correctness of the signals and to
discard an inappropriate packet signal had the advantage of allowing invalid and fake
packets to be discarded such that no further processing is wasted on these packets.

It would have been obvious for one of ordinary skill in the art at the time of the invention, when presented with the work of Maufer et al., to combine retaining and applying a screening policy to packets to judge the correctness of the signals and to discard an inappropriate packet signal, as suggested by Maufer et al., with the system and method of Kurita et al. and Ala-Luukko et al., with the motivation being to allow invalid and fake packets to be discarded such that no further processing is wasted on these packets.

5.   Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kurita et al. in view of Ala-Luukko et al. and Maufer et al. as applied to claim 6 above, and further in view of Ogawa et al. (U.S. Pat. 6208653 B1).

With respect to claim 7, Maufer et al. discloses indicating a protocol type, port number, and direction to screen for and discard incorrect packets **(See column 1 lines 40-62, column 18 line 58 to column 19 line 9, and column 20 lines 14-40 of Maufer et al. for reference to indicating a protocol, port numbers, message direction to screen for and discard invalid packets)**. The combination of Kurita et al., Ala-Luukko et al., and Maufer et al. does not specifically disclose screening for and discarding packets to avoid congestion.

With respect to claim 7, Ogawa et al., in the field of communications, discloses screening for and discarding packets to avoid congestion **(See the abstract of Ogawa et al. for reference to a gateway screening for congestion and discarding packets**

during congestion periods). Screening for and discarding packets to avoid

congestion has the advantage of relieving packet congestion.

It would have been obvious for one of ordinary skill in the art at the time of the

invention, when presented with the work of Ogawa et al., to combine screening for and

discarding packets to avoid congestion, as suggested by Ogawa et al., with the system

and method of Kurita et al., Ala-Luukko et al., and Maufer et al., with the motivation

being to relieve packet congestion.

6.   Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Kurita in view of Ala-Luukko et al. and further in view of Angwin et al. (U.S. Pat.

6167450).

With respect to claim 10, Ala-Luukko et al. discloses performing inverse

conversion on signals received from the service control point before transmitting the

signals **(See column 4 line 55 to column 5 line 13 and Figure 1 of Ala-Luukko et al.**

for reference to a gateway performing protocol conversion on signals to and from

a service control point based on a message type indicator extracted from a

received signal). The combination of Kurita et al. and Ala-Luukko et al. does not

specifically disclose defining individual interfaces for each service type and transferring

signals of specific service types through corresponding interfaces.

With respect to claim 11, Ala-Luukko et al. discloses using service type

identifiers and performing protocol conversion based on the service type identifiers **(See**

column 4 line 55 to column 5 line 13 and Figure 1 of Ala-Luukko et al. for

reference to a gateway performing protocol conversion on signals to and from a
service control point based on a message type indicator extracted from a
received signal). The combination of Kurita et al. and Ala-Luukko et al. does not
specifically disclose defining individual interfaces for each service type and transferring
signals of specific service types through corresponding interfaces.

      With respect to claims 10 and 11, Angwin et al., in the field of communications,
discloses defining individual interfaces for different service types and transferring
signals of specific service types through corresponding interfaces **(See column 5 lines**
43-58, column 10 line 64 to column 11 line 2, and claim 2 of Angwin et al. for
reference to defining individual port number interfaces for different service types
and transferring signals of the service types through the corresponding ports).
Defining individual interfaces for different service types and transferring signals of
specific service types through corresponding interfaces has the advantage of allowing
packets of different service types to be segregated such that they can easily be handled
according to different processing rules.

      It would have been obvious for one of ordinary skill in the art at the time of the
invention, when presented with the work of Angwin et al., to combine defining individual
interfaces for different service types and transferring signals of specific service types
through corresponding interfaces, as suggested by Angwin et al., with the system and
method of Kurita et al. and Ala-Luukko et al., with the motivation being to allow packets
of different service types to be segregated such that they can easily be handled
according to different processing rules.

Response to Arguments

7.　Applicant's arguments with respect to claims 1-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8.　Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

　　A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JASON E. MATTIS whose telephone number is (571)272-3154. The examiner can normally be reached on M-F 8AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on (571)272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JEM

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